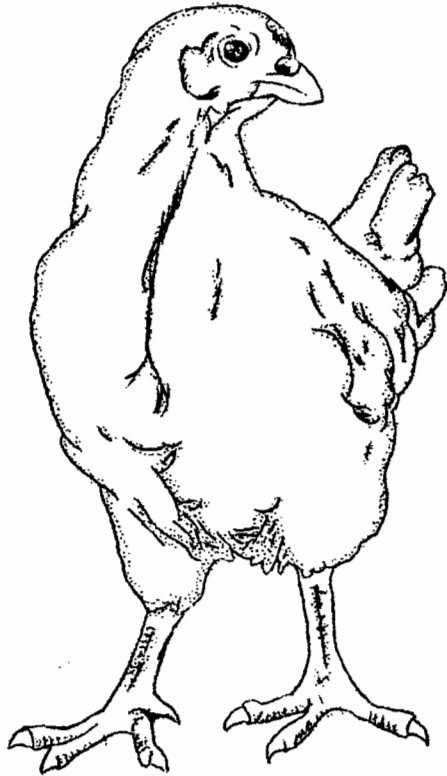


REPLACEMENT

PULLET

COSTS

1968



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INTRODUCTION

The keeping of accurate cost records for replacement pullets is an essential part of the management function of commercial egg ranches. Such records are important if the owner or manager expects to be able to make reductions in costs. By comparing these records with his past records and others made available to him, he can initiate cost reduction programs in many of the various cost categories.

Egg producers have many alternatives regarding their replacement programs. They can raise their own pullets, purchase started pullets, recycle their own hens or purchase old hens to recycle. The decision as to which program to follow requires accurate cost information. Prohibitive costs in one program make it necessary to consider the others.

METHODS

In 1967 a study was undertaken in Riverside County to determine the following information about raising replacement pullets:

1. All costs involved with raising replacement pullets
2. Mortality rates
3. Labor requirements
4. Feed consumption
5. Body weight variability
6. Egg size variability

Thirty flocks were selected to provide the basic information. These flocks were on 21 farms and were located in all of the egg producing areas in the county. All housing types were represented in the study. Twelve different strains of chickens were included. Most farms had only one strain per flock while some had as many as five.

The hatch dates of the various flocks covered the period between August 1967 and April 1968 and are shown in Table No. 1. A total of 861,344 chicks were placed.

All of the farms were given a record book at the start of the project. All records were broken down into four time periods (8, 16, 20 and 24 weeks of age). Feed and bird inventories were made on these dates. The farm advisor visited each farm on these dates and weighed 100 individual birds at random from each strain in the flock. The average weights are shown in this report while the variability results will be discussed in a later report.

At the conclusion of the project the farm advisor visited each farm and went over each entry with the cooperator. The records were then analyzed and discrepancies were brought to the attention of the cooperator and corrected.

DEFINITION OF TERMS

All costs in Tables 2, 4, 6 and 8 are based on the number of survivors at a particular age. Feed, chicks, fuel, medication, vaccine and labor are charged when they occurred. All others are charged proportionately per week.

1. FEED - This represents net feed cost with discounts taken off, medication costs removed and hauling charges added when necessary.

2. CHICKS - Total cost of chicks including all discounts divided by the total number delivered including extras.

3. FUEL - Brooder fuel only. In most cases this represents an actual record, in some cases it represents an estimate. Both natural and bottled gas are included.

4. ELECTRICITY - In most cases this represents an estimate based on the total wattage used at a standard 1¢ per KWH. In some cases where meter records or separate billing was available we used these instead.

5. MEDICATION - This includes all feed, water or injectable medication (not vaccines).

6. VACCINES - This includes the net cost of the vaccine used for a particular farm's vaccination program. No vaccination labor was included in this item.

7. LABOR - This was based on a careful analysis by the owner for each job. Wage rates were actual except when the owner was involved and in those cases we used \$1.75 per hour. Fringe benefits were not included and would add an additional 10-15% to the labor costs quoted.

8. DEPRECIATION - A new value was used for all buildings and equipment at a 10-year depreciation rate.

9. INTEREST - Buildings and equipment were valued at one-half of new value. Land was valued at market value for bare land in the farm's area. Investment in the pullets was considered to be 70¢ for each pullet at 12 weeks of age. A 6% interest rate was used.

10. TAXES - A 25% assessment rate for the values used in the interest category at a rate of \$8.00 per \$100.

11. MANAGEMENT CHARGE - This item is intended to cover the charge for the management that went into the operation. One cent per original pullet was used.

12. MISCELLANEOUS - This item includes water, repairs, small equipment, veterinary fees, disinfectants, etc. A 1¢ per original chick charge was added for overhead to cover office expenses, supplies, telephone, etc.

13. BODY WEIGHT - The average weight of 100 pullets per strain.

14. MORTALITY - This includes all losses whether by culling or death. Roosters were included in this category.

15. EGG INCOME - The value of eggs is calculated at 15¢ per dozen.

16. AVERAGE - In all cases the term average means a simple average of the individual items. The total of the individual items may not be the same as the total listed because of rounding.

GENERAL INFORMATION

Table No. 1

Flock Number	Brood Size	Housing			Brooding Frequency	Hatch Date	Chick Cost	Age of Debeaking	Move to		% Production 24th Week
		Brooder	Grow	Lay					Grow	Lay	
1	C	LTC-W	LTC-W	LTC-W	17 wks	Dec. '67	23.1¢	17 wks	--	14 wks	16.6%
2	C	LTC-W	LTC-W	LTC-W	17 "	Feb. '68	23.1	17 "	--	14 "	12.6
3	B	Con-W	Con-W	Con-W	17 "	Nov. '67	28.6	9 "	7 wks	20 "	30.8
4	B	Con-W	Con-W	Con-W	17 "	April '68	25.9	8 days	6 "	24 "	23.5
5	B	LTC-W	LTC-W	LTC-W	52 "	Jan. '68	26.7	--	--	6 "	53.5
6	A	Con-W	Con-W	Con-W	13 "	Feb. '68	28.2	18 wks	8 wks	18 "	52.7
7	C	Floor	Floor	Con-W	26 "	Feb. '68	25.4	6 days	--	18 "	?
8	A	LTC-W	LTC-W	LTC-W	13 "	Oct. '67	30.6	16 wks	9 wks	20 "	22.1
9	A	LTC-W	LTC-W	LTC-W	13 "	Feb. '68	23.6	16 "	9 wks	20 "	49.9
10	B	LTC-W	Con-W	Con-W	10 "	March '68	25.5	--	--	15 "	46.9
11	A	LTC-W	LTC-W	Con-W	12 "	Aug. '67	30.5	14 wks	8 wks	22 "	7.6
12	A	LTC-W	LTC-W	LTC-W	12 "	Jan. '68	30.5	12 "	9 "	18 "	27.1
13	A	Con-W	Con-W	Con-W	6 "	Feb. '68	22.3	8 d & 18 w	3 "	12 "	62.0
14	A	Con-W	Con-W	Con-W	12 "	Sept. '67	26.3	20 wks	8 "	21 "	63.7
15	A	Con-W	Con-W	Con-W	12 "	Dec. '67	25.6	19 "	8 "	21 "	70.2
16	A	Floor	Floor	LTC-W	23 "	Oct. '67	28.0	8 days	--	19 "	14.4
17	C	LTC-W	LTC-W	Con-W	10 "	Oct. '67	27.5	21 wks	7 "	14 "	38.5
18	C	LTC-W	LTC-W	Con-W	10 "	Dec. '67	24.8	21 "	7 "	16 "	22.4
19	C	Floor	Con-W	Con-W	17 "	Sept. '67	28.3	--	9 "	20 "	24.4
20	C	Floor	Con-W	Con-W	17 "	Feb. '68	27.1	15 wks	9 "	20 "	16.4
21	A	LTC-W	LTC-W	Con-W	26 "	Feb. '68	28.5	8 days	--	21 "	43.9
22	B	LTC-W	Con-W	Con-W	13 "	Nov. '67	29.6	14 wks	9 wks	22 "	16.7
23	B	Floor	Floor	LTC-W	21 "	March '68	30.2	13 "	--	18 "	3.5
24	A	Floor	Con-W	Con-W	16 "	Oct. '67	29.3	8 w & 18 w	8 wks	23 "	8.0
25	A	Floor	Con-W	Con-W	16 "	Feb. '68	26.9	9 w & 20 w	8 "	23 "	25.1
26	B	LTC-W	Con-W	Con-W	13 "	Sept. '67	28.0	--	--	13 "	34.7
27	B	LTC-W	Con-W	Con-W	13 "	Dec. '67	26.9	9 wks	--	12 "	31.0
28	B	Con-W	Con-W	Con-W	3 "	Sept. '67	26.2	3 d & 9 w	7 wks	13 "	14.8
29	A	Floor	Con-W	Con-W	15 "	Sept. '67	30.6	10 wks	8 "	21 "	39.2
30	B	Floor	Con-W	Con-W	9 "	Nov. '67	29.6	19 "	7 "	16 "	17.4
							27.2¢				30.7%

A = 3,000 to 10,000
 B = 10,000 to 30,000
 C = Over 30,000

LTC = solid walls and mechanical ventilation
 W = wire cages
 Con = conventional open-type housing

8-WEEK SUMMARY OF COSTS (Cents per Survivor)

Table No. 2

	Flock No.	Feed	Chix	Fuel	Elec.	Medi.	Vaccine	Labor	Depr.	Int.	Taxes	Mgt.	Misc.	Total
Low Cost 1/3	28 B	11.0¢	27.1¢	.3¢	0	0	3.5¢	6.4¢	1.7¢	1.4¢	.3¢	.3¢	.6¢	52.7¢
	25 A	14.4	27.8	1.0	.1¢	.8¢	1.9	2.4	2.7	1.7	.5	.3	.8	54.4
	29 A	11.6	31.6	0	.7	.2	.5	4.4	1.9	2.0	.6	.3	.5	54.5
	1 C	16.0	23.4	1.0	.5	1.3	1.2	5.0	3.2	1.7	.5	.3	.6	54.9
	9 A	19.5	24.3	.3	.2	0	2.3	1.9	3.4	1.9	.5	.3	.4	55.1
	4 B	15.5	27.0	1.3	0	.9	2.0	4.3	1.7	1.4	.4	.3	.4	55.2
	10 B	17.3	26.5	.5	.1	.5	2.6	1.5	3.1	1.8	.5	.3	.7	55.5
	27 B	18.1	27.5	2.1	.3	0	.7	1.7	2.8	1.4	.4	.3	.3	55.6
	14 A	17.3	27.0	2.1	.1	0	.4	2.8	3.3	1.8	.5	.3	.5	56.3
	26 B	17.8	29.0	1.2	.5	0	.9	1.8	3.7	1.8	.5	.3	.4	57.8
	Average	15.9	27.1	1.0	.3	.4	1.6	3.2	2.8	1.7	.5	.3	.5	55.2
Mid Cost 1/3	20 C	13.8	28.1	.2	.1	1.2	1.8	6.3	2.4	1.8	.5	.3	1.3	57.9
	22 B	15.4	31.0	.1	.1	.2	2.4	4.2	2.0	1.4	.3	.3	.6	58.1
	2 C	18.4	24.3	1.2	.5	1.1	1.3	5.1	3.3	1.7	.5	.4	.6	58.5
	5 B	19.4	27.3	.3	.6	.1	.8	2.6	4.4	2.1	.7	.3	.4	59.1
	11 A	15.6	31.2	1.3	.3	0	2.0	3.1	2.6	1.6	.4	.3	.5	59.1
	13 A	18.8	22.9	0	.2	.9	2.4	10.0	1.7	1.3	.3	.3	.5	59.2
	23 B	15.6	31.0	1.2	.1	1.3	.6	3.4	3.0	1.8	.6	.3	.4	59.2
	15 A	19.5	26.2	3.4	.1	0	.5	3.1	3.5	1.9	.5	.3	.5	59.5
	16 A	13.0	28.4	3.2	.1	1.9	.6	5.9	3.3	1.8	.5	.3	.4	59.5
	30 B	19.4	30.2	.8	.1	1.5	.3	3.3	1.7	1.2	.5	.3	.4	59.8
	Average	16.9	28.1	1.2	.2	.8	1.3	4.7	2.8	1.7	.5	.3	.6	59.0
High Cost 1/3	7 C	11.4	30.4	1.1	.1	1.6	2.5	4.9	3.1	3.0	1.0	.4	.6	59.9
	19 C	16.2	29.4	.2	.1	.8	1.3	6.3	2.4	1.8	.5	.3	.9	60.2
	18 C	19.3	25.9	.7	.3	2.0	.7	5.8	3.5	1.7	.5	.3	.8	61.5
	6 A	18.9	29.3	.4	.1	2.1	3.0	4.0	1.9	1.4	.4	.3	.5	62.2
	3 B	18.4	31.0	1.7	.1	.8	2.0	4.3	1.7	1.3	.4	.4	.4	62.3
	24 A	15.1	31.7	1.1	.1	.9	2.7	4.2	3.0	1.8	.5	.4	.9	62.3
	8 A	17.7	32.1	.8	.2	.9	2.4	1.9	3.5	1.9	.5	.3	.4	62.7
	12 A	19.0	32.1	1.2	.3	.1	1.9	3.2	3.4	1.3	.4	.3	.5	63.8
	17 C	18.4	28.4	.8	.3	2.6	.7	6.2	3.7	1.8	.5	.3	.8	64.6
	21 A	17.0	29.1	3.3	.6	1.0	2.3	5.8	6.0	2.5	.8	.3	.6	69.3
	Average	17.1	29.9	1.1	.2	1.3	2.0	4.7	3.2	1.9	.6	.3	.6	62.9
OVERALL AVERAGE		16.6	28.4	1.1	.2	.8	1.6	4.2	2.9	1.7	.5	.3	.6	59.0
YOUR RESULTS														

8-WEEK MISCELLANEOUS INFORMATION

Table No. 3

	Flock No.	Body Weight	Feed Consumed	\$/100 lbs.	Labor/Pullet	Mortality
Low Cost 1/3	28 B	1.33 lbs	3.14 lbs	\$3.50	1.54 min	3.15%
	25 A	1.35	3.90	3.69	.84	3.15
	29 A	1.26	3.01	3.86	1.58	3.27
	1 C	1.28	3.67	4.37	1.71	1.55
	9 A	1.32	4.79	4.07	.61	3.08
	4 B	1.23	4.20	3.70	1.30	3.84
	10 B	1.64	4.16	4.16	.40	3.66
	27 B	1.50	4.49	4.02	.48	2.18
	14 A	1.42	4.23	4.09	.97	2.53
	26 B	1.54	4.45	3.93	.52	3.38
	Average	1.39	4.00	3.95	1.00	2.98
Mid Cost 1/3	20 C	1.34	3.81	3.63	2.00	3.66
	22 B	1.37	4.05	3.82	1.46	4.26
	2 C	1.18	4.09	4.50	1.77	4.97
	5 B	1.67	4.87	3.98	.79	2.23
	11 A	1.23	3.94	3.97	1.08	2.21
	13 A	1.40	4.60	4.09	3.04	2.46
	23 B	1.34	3.79	4.11	1.23	2.58
	15 A	1.44	4.43	4.41	.97	2.51
	16 A	1.32	3.46	3.76	.78	1.52
	30 B	1.22	4.86	4.00	1.17	1.96
	Average	1.35	4.19	4.03	1.43	2.84
High Cost 1/3	7 C	.91	3.26	3.51	1.68	16.53
	19 C	1.37	4.16	3.89	2.01	3.76
	18 C	1.52	4.82	4.01	1.74	4.17
	6 A	1.35	4.56	4.14	1.41	3.62
	3 B	1.19	4.71	3.91	1.09	7.55
	24 A	1.20	4.23	3.58	1.47	7.41
	8 A	1.43	4.52	3.92	.63	4.46
	12 A	1.31	4.66	4.07	1.02	4.83
	17 C	1.51	4.71	3.91	2.26	3.09
	21 A	1.45	4.28	3.97	1.66	2.08
	Average	1.34	4.39	3.89	1.50	5.74
OVERALL AVERAGE		1.36	4.20	3.95	1.31	3.85
YOUR RESULTS						

By eight weeks of age a spread of 7.7¢ per pullet has shown up between the low and high cost group. The principle reasons for the difference at this age could be attributed to differences in labor requirement and a higher loss rate in the high cost group. Each pullet lost during this period will transfer her costs of from 30 to 60 cents on to the remaining pullets.

Average feed price for each period is dependent upon the actual price of the feeds used and the length of time they were fed during the period. Even at this early age some poultrymen were averaging as little as \$3.50 per cwt while others went as high as \$4.50. A one cent per pound difference on four pounds of consumption makes a four cents difference at this early age.

Labor requirements show considerable differences between individual farms. A range from under one-half minute per pullet to over three minutes per pullet was observed. This difference amounts to over eight cents per pullet. A comparison of labor at this early age is not real fair because of the differences in vaccination programs which may result in more early handling on one ranch while requiring less during later periods.

16-WEEK SUMMARY OF COSTS (Cents per Survivor)

Table No. 4

	Flock No.	Feed	Chix	Fuel	Elec.	Medi.	Vaccine	Labor	Depr.	Int.	Taxes	Mgt.	Misc.	Total
Low Cost 1/3	16 A	38.1¢	29.3¢	3.3¢	.1¢	4.0¢	3.3¢	2.9¢	6.8¢	3.8¢	1.1¢	.7¢	.8¢	94.1¢
	28 B	39.7	28.5	.3	.1	2.2	4.4	10.2	3.5	3.0	.7	.7	1.1	94.5
	4 B	41.6	29.1	1.4	.1	3.8	3.7	6.6	3.6	2.9	.9	.8	.8	95.4
	10 B	49.4	26.9	.5	.2	.8	3.4	5.0	6.3	3.6	1.0	.7	1.3	99.1
	27 B	50.7	28.6	2.2	.7	.4	1.3	4.7	5.9	2.9	.8	.6	.7	99.3
	11 A	42.4	32.7	1.3	.7	0	4.0	6.9	5.6	3.3	.9	.7	1.1	99.4
	13 A	44.2	23.5	0	.4	.9	4.9	17.1	3.5	2.7	.6	.7	1.0	99.4
	14 A	49.5	27.3	2.1	.1	0	2.8	4.6	6.7	3.7	1.0	.7	1.2	99.7
	26 B	49.2	29.3	1.2	.9	.7	1.5	4.1	7.5	3.7	1.0	.7	.8	\$1.006
	9 A	48.4	24.8	.7	.5	0	5.3	7.7	6.9	3.9	1.1	.7	.8	1.008
	Average	45.3	28.1	1.3	.4	1.3	3.5	7.0	5.6	3.4	.9	.7	1.0	98.2¢
Mid Cost 1/3	2 C	40.3	25.2	1.3	1.1	2.0	5.0	12.5	6.8	3.6	1.1	.7	1.3	1.009
	24 A	41.9	32.6	1.1	.2	1.0	4.6	6.8	6.2	3.8	1.1	.7	1.8	1.018
	7 C	35.8	31.8	1.1	.2	4.4	3.6	8.0	6.4	6.3	2.2	.8	1.2	1.018
	23 B	42.9	32.2	1.3	.2	2.9	2.1	7.6	6.2	3.7	1.2	.7	.8	1.019
	5 B	51.9	27.8	.3	1.3	.2	1.1	3.5	8.9	4.2	1.5	.7	.7	1.022
	30 B	51.9	30.8	.9	.2	1.5	1.8	6.7	3.6	2.5	1.0	.7	.8	1.024
	1 C	45.1	23.8	1.1	1.1	2.3	4.8	12.0	6.4	3.4	1.0	.7	1.2	1.028
	29 A	48.5	33.0	0	.9	.2	1.6	9.5	4.0	4.2	1.2	.7	1.1	1.050
	20 C	41.5	28.7	.2	.1	1.6	5.2	16.3	4.9	3.7	1.1	.7	1.9	1.059
	3 B	48.1	34.2	1.9	.1	2.6	2.8	7.5	3.7	3.0	1.0	.8	.9	1.066
	Average	44.8	30.0	.9	.5	1.9	3.3	9.0	5.7	3.8	1.2	.7	1.2	1.031
High Cost 1/3	15 A	55.6	26.8	3.5	.1	0	3.0	5.1	7.1	3.9	1.1	.7	1.1	1.078
	6 A	51.5	30.5	.4	.1	2.8	6.6	7.2	4.0	2.9	.8	.7	1.0	1.086
	25 A	45.3	29.7	1.1	.2	9.7	2.8	6.9	5.8	3.7	1.1	.7	1.7	1.086
	19 C	46.8	30.1	.2	.1	2.3	2.0	15.2	4.9	3.7	1.1	.7	1.9	1.091
	8 A	49.3	32.4	.8	.5	1.1	5.4	7.9	7.0	3.9	1.1	.7	.8	1.110
	22 B	51.2	34.5	.1	.5	.4	5.4	9.9	4.5	3.0	.7	.8	1.3	1.123
	17 C	50.4	29.6	.9	.7	3.5	1.2	11.9	7.7	3.8	1.0	.7	1.7	1.131
	12 A	52.3	33.8	1.2	.7	.1	4.7	8.7	7.1	2.8	.9	.7	1.1	1.142
	18 C	52.6	28.4	.7	.6	5.3	1.6	12.4	7.6	3.8	1.0	.8	1.8	1.167
	21 A	50.7	32.2	3.7	1.2	1.5	4.1	10.6	13.2	5.5	1.9	.8	1.4	1.269
	Average	50.6	30.8	1.3	.5	2.7	3.7	9.6	6.9	3.7	1.1	.7	1.4	1.128
OVERALL AVERAGE		46.9	29.6	1.2	.5	1.9	3.5	8.5	6.1	3.6	1.1	.7	1.2	1.047
YOUR RESULTS														

16-WEEK MISCELLANEOUS INFORMATION

Table No. 4

	Flock No.	Body Weight	Feed Consumed	\$/100 lbs.	Labor/Pullet	Mortality
Low Cost 1/3	16 A	2.77 lbs	11.19 lbs	\$3.40	1.79 min	4.27%
	28 B	2.71	11.91	3.33	2.56	8.05
	4 B	2.64	12.05	3.45	1.98	11.07
	10 B	2.85	13.05	3.79	1.29	5.05
	27 B	3.01	13.45	3.77	1.23	6.03
	11 A	2.24	11.87	3.57	2.36	6.72
	13 A	2.61	12.09	3.65	5.19	4.94
	14 A	2.83	13.78	3.59	1.55	3.49
	26 B	2.95	13.26	3.71	1.12	4.36
	9 A	2.58	12.74	3.80	2.26	4.98
	Average	2.72	12.54	3.61	2.13	5.90
Mid Cost 1/3	2 C	2.46	9.97	4.04	4.42	8.61
	24 A	2.86	12.19	3.44	2.32	10.00
	7 C	2.27	10.61	3.38	2.76	20.37
	23 B	2.46	11.79	3.64	2.69	6.27
	5 B	3.02	14.72	3.53	1.06	3.97
	30 B	2.55	14.02	3.70	2.37	4.18
	1 C	2.49	11.77	3.83	4.26	2.91
	29 A	2.27	13.39	3.62	3.29	7.27
	20 C	2.41	11.91	3.49	5.28	5.61
	3 B	2.46	12.88	3.74	2.08	16.32
	Average	2.53	12.33	3.64	3.05	8.55
High Cost 1/3	15 A	2.79	14.86	3.74	1.60	4.52
	6 A	2.63	13.81	3.73	2.48	7.62
	25 A	2.57	12.81	3.54	2.23	9.38
	19 C	2.58	13.57	3.45	4.93	5.96
	8 A	2.83	13.33	3.70	2.30	5.53
	22 B	2.37	13.63	3.76	3.42	13.98
	17 C	2.95	13.36	3.77	4.27	7.12
	12 A	2.69	13.88	3.77	2.74	9.66
	18 C	2.70	13.79	3.82	3.89	12.69
	21 A	2.63	13.94	3.64	2.73	11.71
	Average	2.67	13.70	3.69	3.06	8.82
OVERALL AVERAGE		2.64	12.85	3.65	2.75	7.75
YOUR RESULTS						

By sixteen weeks real differences have been established. A five-cent difference in feed cost per pullet makes up approximately one-third of the difference between the low and high cost groups.

Labor and chick cost make up another five cents of the difference while the balance is spread over the remaining items.

Average body weight at this age is running slightly over the recommended hatchery goals. It is interesting to note that the feed consumption of the high cost group is running over one pound per pullet over the low cost group but most of this is due to increased mortality rates.

By this time three or four ranches have started to experience severe losses to Mareks Disease. A loss at this age represents \$.60 to \$1.20 down the drain.

20-WEEK SUMMARY OF COSTS (Cents per Survivor)

Table No. 6

	Flock No.	Feed	Chix	Fuel	Elec.	Medi.	Vaccine	Labor	Depr.	Int.	Taxes	Mgt.	Misc.	Total
Low Cost 1/3	28 B	55.6¢	29.3¢	.3¢	.1¢	2.3¢	5.8¢	11.9¢	4.4¢	3.7¢	.9¢	.9¢	1.4¢	\$1.166
	9 A	58.6	24.9	.8	.6	0	5.6	10.6	8.3	4.7	1.3	.8	1.0	1.170
	11 A	56.4	33.1	1.4	.8	0	4.5	7.6	6.8	4.0	1.1	.9	1.3	1.178
	10 B	62.2	27.5	.5	.3	1.1	5.0	6.1	7.7	4.5	1.2	.9	1.6	1.185
	4 B	59.2	30.5	1.4	.1	5.2	4.2	7.7	4.5	3.7	1.2	.9	1.1	1.198
	13 A	58.3	24.1	0	.5	.9	6.1	21.1	4.3	3.3	.7	.9	1.2	1.213
	26 B	65.2	29.4	1.2	1.1	1.2	1.8	5.3	9.0	4.5	1.3	.8	1.0	1.217
	1 C	59.2	24.0	1.1	1.3	2.8	4.9	13.3	7.8	4.1	1.2	.8	1.5	1.219
	27 B	67.6	28.7	2.2	1.0	.4	1.6	5.8	8.9	4.4	1.2	.9	1.0	1.237
	30 B	70.2	31.0	.9	.2	1.5	1.8	8.1	4.3	3.1	1.2	.8	.9	1.240
	Average	61.3	28.3	1.0	.6	1.5	4.1	9.8	6.6	4.0	1.1	.9	1.2	1.202
Mid Cost 1/3	29 A	61.9	33.5	0	.9	.2	2.1	11.9	4.8	5.1	1.5	.9	1.4	1.242
	24 A	56.7	33.1	1.1	.2	3.9	4.7	8.0	7.5	4.6	1.4	.9	2.2	1.242
	14 A	67.6	27.4	2.1	.1	0	4.7	6.8	8.1	4.5	1.2	.8	1.2	1.246
	5 B	71.0	27.9	.3	1.5	.5	1.3	3.7	10.7	5.1	1.7	.8	.9	1.256
	2 C	60.5	25.5	1.3	1.4	2.2	5.2	14.7	8.3	4.3	1.3	.9	1.6	1.271
	16 A	59.3	30.1	3.4	.2	4.5	3.4	10.0	8.4	4.7	1.3	.9	1.0	1.272
	23 B	58.8	33.4	1.3	.2	3.7	2.4	12.0	7.8	4.7	1.5	.9	1.0	1.277
	20 C	57.9	29.0	.2	.2	1.9	5.3	18.5	5.9	4.4	1.3	.9	2.3	1.278
	6 A	65.1	31.3	.4	.2	3.3	7.0	9.5	4.9	3.6	.9	.9	1.3	1.283
	15 A	70.2	27.1	3.5	.1	0	5.0	7.6	8.6	4.7	1.3	.8	1.3	1.301
	Average	62.9	29.8	1.4	.5	2.0	4.1	10.3	7.5	4.6	1.3	.9	1.4	1.267
High Cost 1/3	8 A	62.9	32.8	.9	.6	1.2	5.8	10.9	8.5	4.8	1.3	.9	1.0	1.315
	3 B	64.2	37.0	2.0	.2	2.8	3.5	10.3	4.8	3.9	1.2	1.0	1.1	1.319
	25 A	57.5	31.2	1.1	.2	11.8	3.9	10.1	7.3	4.6	1.4	.9	2.1	1.322
	7 C	53.4	33.9	1.2	.2	5.4	4.3	12.9	8.2	8.1	2.7	1.1	1.5	1.327
	17 C	67.6	30.0	.9	.8	4.5	1.2	12.4	9.4	4.6	1.2	.9	2.1	1.354
	19 C	64.7	30.9	.2	.2	3.0	3.6	17.8	6.1	4.5	1.3	.9	2.3	1.355
	12 A	70.4	33.8	1.2	1.0	.1	5.1	10.7	8.5	3.4	1.1	.9	1.3	1.374
	22 B	68.9	36.2	.1	.6	.5	6.7	12.2	5.7	3.8	.9	1.0	1.7	1.383
	18 C	73.9	30.2	.8	.8	6.5	1.7	15.6	9.7	4.9	1.3	1.0	2.2	1.487
	21 A	76.1	35.3	4.1	1.6	2.0	6.4	14.0	17.4	7.2	2.5	1.0	1.9	1.693
	Average	66.0	33.1	1.3	.6	3.8	4.2	12.7	8.6	5.0	1.5	1.0	1.7	1.393
OVERALL AVERAGE		63.4	30.4	1.2	.6	2.4	4.2	10.9	7.6	4.5	1.3	.9	1.4	1.287
YOUR RESULTS														

20-WEEK MISCELLANEOUS INFORMATION

Table No. 7

	Flock No.	Body Weight	Feed Consumed	\$/100 lbs.	Labor/Pullet	Mortality
Low Cost 1/3	28 B	3.22 lbs	16.82 lbs	\$3.31	2.95 min	10.52%
	9 A	2.81	15.51	3.77	3.06	5.13
	11 A	2.70	16.22	3.48	2.58	7.93
	10 B	3.41	16.82	3.70	1.55	7.31
	4 B	3.20	17.36	3.41	2.32	15.02
	13 A	2.66	16.23	3.59	6.39	7.25
	26 B	3.44	18.14	3.60	1.43	4.80
	1 C	2.90	15.93	3.72	4.75	3.68
	27 B	3.49	18.70	3.62	1.65	6.28
	30 B	2.99	19.57	3.58	2.87	4.59
	Average	3.08	17.13	3.58	2.96	7.25
Mid Cost 1/3	29 A	3.01	17.30	3.58	4.06	8.57
	24 A	2.77	16.55	3.43	2.76	11.30
	14 A	3.13	19.12	3.53	2.29	4.15
	5 B	3.58	20.68	3.43	1.11	4.39
	2 C	2.89	15.93	3.80	5.25	9.46
	16 A	3.06	17.76	3.34	3.15	7.02
	23 B	2.89	16.40	3.59	4.35	9.70
	20 C	3.13	16.77	3.46	6.04	6.45
	6 A	3.04	17.65	3.69	3.29	9.72
	15 A	3.19	19.18	3.66	2.39	5.50
	Average	3.07	17.73	3.55	3.47	7.63
High Cost 1/3	8 A	3.17	17.16	3.67	3.16	6.67
	3 B	2.84	17.53	3.66	2.90	22.70
	25 A	2.75	16.29	3.53	3.23	13.79
	7 C	2.70	16.10	3.32	4.51	25.14
	17 C	3.43	17.95	3.76	4.42	8.16
	19 C	3.08	19.07	3.39	5.79	8.39
	12 A	2.73	19.46	3.62	3.38	9.66
	22 B	2.99	18.26	3.78	4.25	18.07
	18 C	3.23	19.26	3.84	4.89	17.82
	21 A	3.15	21.35	3.56	3.52	19.36
	Average	3.01	18.24	3.61	4.01	14.98
OVERALL AVERAGE		3.05	17.70	3.58	3.48	9.95
YOUR RESULTS						

Twenty-week costs are the most commonly discussed costs in the egg industry. Most started pullets are sold at this age, and therefore most pullet growers use this age for comparison.

The group spread has grown to 20¢ per pullet, whereas the total spread is over 50¢ per pullet.

Almost all items are now affected by the double mortality rate of the high-cost group over the low-cost group. Five of the ten flocks in the high-cost group have lost over 15% of their pullets by 20 weeks of age.

Most of the vaccinations, debeaking and movings have been accomplished by this time, therefore, labor costs will not increase much more.

24-WEEK SUMMARY OF COSTS (Cents per Survivor)

Table No. 8

	Flock No.	Feed	Chix	Fuel	Elec.	Medi.	Vaccine	Labor	Depr.	Int.	Taxes	Mgt.	Misc.	Total	Income	Net
Low Cost 1/3	9 A	76.1¢	25.0¢	1.0¢	.7¢	0	5.7¢	11.1¢	10.4¢	5.9¢	1.7¢	1.1¢	1.2¢	\$1.396	10.4¢	\$1.292
	13 A	75.9	24.5	0	.6	4.9¢	6.6	23.0	5.4	4.2	.9	1.1	1.6	1.487	15.6	1.331
	10 B	79.8	28.2	.5	.3	1.1	5.1	7.1	9.8	5.7	1.5	1.1	2.1	1.423	9.0	1.332
	26 B	78.7	29.6	1.2	1.4	1.2	1.8	5.9	11.3	5.6	1.6	1.1	1.2	1.405	7.1	1.334
	15 A	89.8	27.3	3.5	.1	0	5.0	9.6	10.8	5.9	1.7	1.1	1.6	1.565	21.5	1.349
	14 A	86.1	27.7	2.2	.1	0	4.7	8.4	10.2	5.7	1.6	1.1	1.6	1.493	11.1	1.382
	28 B	73.1	30.0	.3	.1	2.3	6.4	13.2	5.6	4.7	1.1	1.1	2.0	1.399	1.3	1.386
	1 C	73.4	24.1	1.1	1.6	4.0	4.9	14.0	9.8	5.2	1.5	1.0	1.8	1.426	2.2	1.404
	6 A	83.9	32.2	.4	.2	3.4	7.2	10.4	6.2	4.6	1.2	1.1	1.6	1.525	11.5	1.410
	27 B	84.9	28.9	2.2	1.3	.4	1.7	6.4	11.2	5.6	1.6	1.1	1.2	1.464	5.4	1.410
	Average	80.2	27.8	1.2	.6	1.7	4.9	10.9	9.1	5.3	1.4	1.1	1.6	1.458	9.5	1.363
Mid Cost 1/3	4 B	76.2	31.7	1.5	.1	6.2	4.4	10.6	5.9	4.8	1.5	1.2	1.4	1.455	4.0	1.414
	8 A	72.8	33.0	.9	.7	1.2	5.8	11.4	10.7	6.0	1.7	1.1	1.3	1.465	3.6	1.429
	5 B	90.3	28.2	.3	1.9	.5	1.3	5.8	13.5	6.4	2.2	1.1	1.1	1.527	9.4	1.433
	2 C	71.3	25.7	1.3	1.7	3.7	5.2	15.5	10.5	5.5	1.6	1.1	2.0	1.451	1.6	1.435
	24 A	68.8	33.3	1.1	.3	4.4	6.5	10.2	9.4	5.8	1.7	1.1	2.7	1.452	1.1	1.442
	30 B	89.5	31.1	.9	.3	1.5	1.8	8.6	5.4	3.9	1.5	1.1	1.1	1.466	2.1	1.445
	11 A	79.1	33.7	1.4	1.0	0	4.5	9.2	8.6	5.1	1.4	1.1	1.6	1.467	.8	1.459
	29 A	83.8	33.9	0	1.0	.2	2.2	14.9	6.1	6.5	1.9	1.1	1.7	1.534	6.1	1.473
	16 A	75.4	30.9	3.5	.2	4.6	3.5	10.7	10.7	6.0	1.7	1.1	1.2	1.496	1.8	1.478
	20 C	73.1	29.2	.2	.2	2.1	6.4	20.1	7.5	5.6	1.6	1.1	2.8	1.499	2.1	1.478
	Average	78.0	31.1	1.1	.7	2.4	4.2	11.7	8.8	5.6	1.7	1.1	1.7	1.481	3.3	1.449
High Cost 1/3	23 B	74.9	33.8	1.3	.3	4.2	2.4	12.4	9.8	5.9	1.9	1.1	1.2	1.492	.7	1.486
	3 B	79.4	38.0	2.1	.2	2.8	3.5	11.2	6.1	5.0	1.6	1.3	1.4	1.528	3.6	1.492
	25 A	71.1	32.9	1.2	.3	14.2	4.1	12.2	9.6	6.1	1.8	1.2	2.8	1.575	5.1	1.524
	7 C	67.1	34.7	1.2	.3	5.5	4.4	13.8	10.5	10.4	3.5	1.4	1.9	1.546	2.1	1.525
	17 C	83.6	30.0	.9	1.0	4.7	1.5	15.1	11.8	5.8	1.6	1.1	2.6	1.601	6.2	1.538
	12 A	86.0	34.2	1.2	1.1	.1	5.2	11.7	10.8	4.3	1.4	1.1	1.7	1.587	3.7	1.550
	22 B	84.1	37.4	.1	.8	.6	7.0	14.7	7.4	4.9	1.2	1.3	2.2	1.616	1.9	1.597
	19 C	85.5	32.0	.2	.2	3.8	3.8	19.9	7.9	5.9	1.7	1.1	3.0	1.650	3.1	1.619
	18 C	90.2	31.7	.8	1.1	6.9	2.3	18.7	12.8	6.4	1.7	1.3	2.9	1.766	3.8	1.728
	21 A	96.4	36.4	4.2	2.1	3.7	6.8	20.1	22.4	9.3	3.2	1.3	2.4	2.082	8.8	1.994
	Average	81.8	34.1	1.3	.7	4.7	4.1	15.0	10.9	6.4	2.0	1.2	2.2	1.644	3.9	1.605
OVERALL AVERAGE		80.0	31.0	1.2	.7	2.9	4.4	12.5	9.6	5.8	1.7	1.1	1.8	1.528	5.6	1.472
YOUR RESULTS																

24-WEEK MISCELLANEOUS INFORMATION

Table No. 9

	Flock No.	Body Weight	Feed Consumed	\$/100 lbs.	Labor/Pullet	Mortality	Labor Cost \$/hour
Low Cost 1/3	9 A	3.23 lbs	20.24 lbs	\$3.76	3.23 min	5.51%	\$2.05
	13 A	3.30	21.61	3.51	6.99	9.02	1.97
	10 B	4.00	22.45	3.55	1.88	9.32	2.25
	26 B	3.88	22.19	3.55	1.63	5.35	2.16
	15 A	3.51	25.18	3.57	3.05	6.16	1.90
	14 A	3.55	24.74	3.48	2.81	5.10	1.79
	28 B	3.88	22.18	3.29	3.29	12.37	2.40
	1 C	3.29	20.47	3.59	5.03	4.41	1.67
	6 A	3.37	23.22	3.61	3.60	12.23	1.73
	27 B	4.02	24.06	3.53	1.73	6.97	2.22
	Average	3.60	22.63	3.54	3.32	7.64	2.01
Mid Cost 1/3	4 B	3.79	22.55	3.38	3.19	18.24	1.99
	8 A	3.71	19.99	3.64	3.33	7.10	2.05
	5 B	4.05	26.52	3.40	1.74	5.17	1.99
	2 C	3.45	19.54	3.81	5.57	10.34	1.67
	24 A	3.71	20.09	3.42	3.45	11.85	1.77
	30 B	3.51	25.52	3.51	3.03	4.78	1.70
	11 A	3.31	23.16	3.42	3.14	9.37	1.76
	29 A	3.46	23.79	3.52	5.08	9.88	1.76
	16 A	3.70	22.67	3.33	3.39	9.28	1.90
	20 C	3.59	21.63	3.38	6.60	7.07	1.83
	Average	3.63	22.55	3.48	3.85	9.31	1.84
High Cost 1/3	23 B	3.26	21.11	3.55	4.50	10.67	1.66
	3 B	3.33	22.13	3.59	3.10	24.74	2.11
	25 A	3.16	20.19	3.52	3.97	18.25	1.84
	7 C	2.94	20.11	3.34	4.85	26.90	1.71
	17 C	3.96	22.58	3.70	5.37	9.08	1.68
	12 A	3.41	24.18	3.56	3.69	10.90	1.90
	22 B	3.27	22.67	3.71	5.11	20.80	1.72
	19 C	3.70	25.49	3.35	6.54	11.57	1.83
	18 C	3.43	23.88	3.78	5.93	21.68	1.89
	21 A	3.54	27.58	3.49	5.75	21.85	2.10
	Average	3.40	22.99	3.56	4.88	17.64	1.84
OVERALL AVERAGE		3.54	22.72	3.52	4.01	11.53	1.90
YOUR RESULTS							

By 24 weeks most flocks have started into production, and the value of these eggs must be subtracted if we are to come up with net costs. Income varied from less than one cent per pullet for the late maturing flock to over 20¢ for the early maturing flock.

By 24 weeks of age five flocks had over 20% mortality. Four of these attributed the losses to Marek's Disease while one had an early outbreak of laryngotracheitis.

Feed consumption varied from just under 20 pounds per pullet to over 27 pounds. The highest user of feed also had high mortality. The second highest user of feed produced the heaviest pullets. The overall average pullet weight was slightly over the hatchery goal.

A SUMMARY OF THE LOW AND HIGH RESULTS*

Table No. 10

Item	8 Weeks		16 Weeks		20 Weeks		24 Weeks	
	Low 1/3	High 1/3	Low 1/3	High 1/3	Low 1/3	High 1/3	Low 1/3	High 1/3
<u>Cost Items**</u>								
Feed	13.7¢	19.1¢	41.2¢	51.9¢	57.2¢	70.4¢	72.4¢	88.3¢
Chick	25.5	31.2	26.3	32.9	26.6	34.2	26.9	34.8
Fuel	.2	2.1	.3	2.2	.3	2.3	.3	2.3
Electricity	.1	.5	.1	.9	.2	1.1	.2	1.4
Medicine	0	1.7	.2	4.1	.3	5.2	.3	6.0
Vaccine	.6	2.6	1.7	5.1	2.0	5.9	2.2	6.4
Labor	2.2	6.3	5.0	12.8	6.8	15.3	8.1	17.6
Depreciation	1.9	3.5	4.0	8.0	5.0	9.9	6.4	12.6
Interest	1.4	2.1	2.9	4.3	3.7	5.4	4.7	6.9
Taxes	.4	.6	.8	1.4	1.0	1.7	1.4	2.1
Management	.3	.3	.7	.8	.8	1.0	1.1	1.2
Miscellaneous	.4	.8	.8	1.6	1.0	2.0	1.2	2.6
<u>Miscellaneous Items</u>								
Body weight (lbs)	1.21	1.49	2.40	2.89	2.77	3.34	3.25	3.87
Feed consumption (lbs)	3.60	4.71	11.52	14.00	16.19	19.47	20.50	25.09
Feed cost per CWT	\$3.69	\$4.20	\$3.46	\$3.81	\$3.41	\$3.74	\$3.38	\$3.68
Minutes labor/pullet	.70	1.95	1.60	4.17	2.10	5.06	2.55	5.80
Mortality	2.12%	6.18%	4.27%	12.38%	5.16%	16.34%	5.76%	18.89%
Chick price	24.6¢	29.8¢	--	--	--	--	--	--
Labor cost/hour	--	--	--	--	--	--	\$1.71	\$2.13
Egg income	--	--	--	--	--	--	1.6¢	11.1¢

*Based on the low ten and high ten in each category.

**Cost per survivor.

SUMMARY

Cost studies are useful tools as they provide guide posts for industry comparison. It should be cautioned, though, that low costs alone are no measure of the true value of the pullets produced.

A few cents savings in cost is easily offset by slight improvements in various performance factors.

1% higher production is worth 5 cents per hen

5% more large eggs is worth 5½ cents per hen

.1 pound less feed per dozen eggs is worth 6½ cents per hen

Only through a continuous and thorough cost analysis program can you expect to effectively evaluate costs versus returns.

Higher costs may be justified if they will yield greater returns or if they allow the diversion of capital to higher return investments.

A series of related publications will be published in the winter of 1968-69 to go into greater depth on the subject of body weight, labor requirements, feed usage and egg size based on this same group of pullets.

A copy of these reports plus a copy of the basic record book may be obtained at this office.